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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/807,126	04/06/2001	Rainer Eckert	P01-0073	4270
29177	7590	09/19/2005	EXAMINER	
BELL, BOYD & LLOYD, LLC P. O. BOX 1135 CHICAGO, IL 60690-1135			CHO, UN C	
			ART UNIT	PAPER NUMBER
			2687	
DATE MAILED: 09/19/2005				

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	09/807,126	ECKERT, RAINER	
	<b>Examiner</b>	<b>Art Unit</b>	
	Un C. Cho	2687	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 11 August 2005.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-19 is/are pending in the application.
- 4a) Of the above claim(s) 1-10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 11-19 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
     Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
     Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

### ***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 8/11/2005 has been entered.

### ***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 11 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Portin (US 5,794,159) in view of Chao-Cheng (US 5,991,643).

Regarding claim 11, Portin discloses multi-mode radiotelephone having a first transmission antenna (Portin, Fig. 3, 12a or 12b) for transmitting signals within the transmission frequency band of a first frequency range (Portin, Col. 2, lines 18 – 21), a second transmission antenna (Portin, Fig. 3, 12a or 12b) for transmitting signals within the transmission frequency band of a second frequency range (Portin, Col. 2, lines 21 – 24), a first reception antenna (Portin,

Fig. 3, 12a or 12b) for receiving signals within the receiving frequency band of the first frequency range (Portin, Col. 2, lines 13 – 15) and a second reception antenna (Portin, Fig. 3, 12a or 12b) for receiving signals within the receiving frequency band of the second frequency range (Portin, Col. 2, lines 15 – 18).

However, Portin as applied above does not specifically disclose wherein each of the first and second transmission and reception antennas are physically separate. In an analogous art, Chao-Cheng discloses that each of the first and second transmission and reception antennas are physically separate (Four separate antennas for transmission and reception, Fig. 1, 14 – 17; Chao-Cheng, Col. 2, lines 6 – 14). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Chao-Cheng to the system of Portin in order to provide a radio transceiver, which can selectively use the dipole antenna and patch antenna to increase signal communication efficiency (Chao-Cheng, Col. 1, lines 29 – 32).

Regarding claim 15, the claim is interpreted and rejected for the same reason as set forth in claim 11.

4. Claims 12, 13, 14, 16 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Portin in view of Chao-Cheng as applied to claim 11 above and further in view of Miller et al. (US 6,396,365).

Regarding claim 12, Portin in view of Chao-Cheng as applied above discloses the limitations of claim 11. However, Portin in view of Chao-Cheng as

applied above does not specifically disclose that the first and the second transmission antenna are identical. In an analogous art, Miller discloses a pair of identical antennas (Miller, Fig. 1, 101 and 102) for transmission (Miller, Col. 5, lines 1 – 8 and 65 – 66). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Miller to the modified system of Portin and Chao-Cheng in order to provide reception and transmission of signals in different frequency ranges and advantageously allow receivers to be switched between the different frequencies without any substantial loss or degradation of signal.

Regarding claim 13, Portin in view of Chao-Cheng and further in view of Miller as applied to claim 12 above discloses a pair of identical antennas (Miller, Fig. 1, 101 and 102) for reception (Miller, Col. 5, lines 1 – 8 and 65 – 66).

Regarding claim 14, Portin in view of Chao-Cheng and further in view of Miller as applied above discloses multi-mode radiotelephone having a first transmission antenna (Portin, Fig. 3, 12a or 12b) for transmitting signals within the transmission frequency band of a first frequency range (Portin, Col. 2, lines 18 – 21), a second transmission antenna (Portin, Fig. 3, 12a or 12b) for transmitting signals within the transmission frequency band of a second frequency range (Portin, Col. 2, lines 21 – 24), a first reception antenna (Portin, Fig. 3, 12a or 12b) for receiving signals within the receiving frequency band of the first frequency range (Portin, Col. 2, lines 13 – 15) and a second reception antenna (Portin, Fig. 3, 12a or 12b) for receiving signals within the receiving

frequency band of the second frequency range (Portin, Col. 2, lines 15 – 18), wherein each of the first and second transmission and reception antennas are physically separate (Four separate antennas for transmission and reception, Fig. 1, 14 – 17; Chao-Cheng, Col. 2, lines 6 – 14) first and the second transmission antenna being substantially identical and first and second reception antenna being substantially identical (Miller, Col. 5, lines 1 – 8 and 65 – 66).

Regarding claim 16, the claim is interpreted and rejected for the same reason as set forth in claim 12.

Regarding claim 17, the claim is interpreted and rejected for the same reason as set forth in claim 13.

5. Claim 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gillig et al. (US 6,141,560) in view of Chao-Cheng (US 5,991,643).

Regarding claim 18, Gillig discloses an antenna array for operating a mobile station within different mobile radio systems to which a different frequency range is in each case allocated (dual mode mobile station operating within different systems) comprising a first transmission antenna (Fig. 2, 118) and a second transmission antenna (Fig. 2, 119) transmitting a plurality of frequency bands in said array; a first reception antenna (Fig. 2, 118) and a second reception antenna (Fig. 2, 119) receiving said plurality of frequency bands in said array, wherein said array operates without the use of antenna switches (microcomputer, Fig. 2, 130, controls first transmitting, second transmitting, first

receiving and second receiving antennas for communication with its respective systems , Gillig, Col. 3, lines 42 – 66).

However, Gillig as applied above does not specifically disclose wherein each of the first and second transmission and reception antennas are physically separate. In an analogous art, Chao-Cheng discloses that each of the first and second transmission and reception antennas are physically separate (Four separate antennas for transmission and reception, Fig. 1, 14 – 17; Chao-Cheng, Col. 2, lines 6 – 14). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide the technique of Chao-Cheng to the system of Portin in order to provide a radio transceiver, which can selectively use the dipole antenna and patch antenna to increase signal communication efficiency (Chao-Cheng, Col. 1, lines 29 – 32).

6. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Gillig in view of Chao-Cheng as applied to claim 18 above and further in view of Portin.

Regarding claim 19, Gillig in view of Chao-Cheng as applied to claim 18 above does not specifically disclose that the plurality of frequency bands comprise either of a DCS frequency band, a GSM frequency band, a CDMA frequency band and a TD/CDMA frequency band. In an analogous art, Portin discloses that the plurality of frequency bands comprise of digital CDMA, digital TDMA, hybrid TDMA/CDMA and GSM (Portin, Col. 3, lines 9 – 16 and lines 51 – 59). Therefore, it would have been obvious to one of ordinary skill in the art at the

time the invention was made to provide the technique of Portin to the modified system of Gillig and Chao-Cheng in order to provide a dual band radio telephone that employs integrated circuit packages for transmit and receive functions.

***Response to Arguments***

7. Applicant's arguments with respect to claims 11 – 19 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Un C. Cho whose telephone number is (571) 272-7919. The examiner can normally be reached on M ~ F 8:00AM to 4:30PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lester Kincaid can be reached on (571) 272-7922. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Un C Cho  
Examiner  
Art Unit 2687

8/22/05 *UC*

LESTER G. KINCAID  
SUPERVISORY PRIMARY EXAMINER  
*[Signature]* 9/15/05